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DEPARTMENT OF NATURAL RESOURCES

Division of Oil, Gas & Mining

MICHAEL R. STYLER
Executive Director
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Inspection Report

Minerals Regulatory Program

March 7, 2013

Reviewed:

Mine Name: ML 27618	Permit Number: S/025/0025
Operator Name: Althea Crapo & Russ Henry	Inspection Dates: October 18, 2012; November 27, 2012
Inspector(s): Peter Brinton	Time: afternoon (Oct 18) & evening (Nov 27)
Other Participants: Paul Baker	Mine Status: Active

Elements of Inspection	Evaluated	Comment	Enforcement
1. Permits, Revisions, Transfer, Bonds	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Public Safety (shafts, adits, trash, signs, highwalls)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Protection of Drainages / Erosion Control	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Deleterious Material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Roads (maintenance, surfacing, dust control, safety)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Reclamation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Backfilling/Grading (trenches, pits, roads, highwalls, shafts, drill holes)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Soils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Revegetation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Permit fee: Delinquent **Bond Renewal Date:** 07/03/2009 **Bond Amount:** \$11,930

Purpose of Inspection: To inspect and show to Paul Baker the Trail Canyon slopes and current east area mining

Inspection Summary:

West (Trail Canyon) Area -

The bare, less-vegetated slopes in Trail Canyon area of the permit remained unstable. No large-scale slumping had occurred since the dozer earthwork. Tension cracks at the crest and on the slope were again observed, and some degree of ongoing slumping is expected. It appeared that rabbitbrush was beginning to establish on these slopes, which were covered with Russian thistle skeletons and another unidentified plant.

In November, the rabbitbrush-covered dump slopes to the south of the Russian thistle-covered slope were inspected more closely for signs of instability, and significant slumping and fairly recent movement were more clearly documented. At least one slide scarp in this area measured about 4 feet tall, and multiple large tension cracks (up to about 18 inches wide) were present near the top of the slope. Tension cracks were observed on the revegetated dumps to the north of the less-vegetated dumps in past inspections.

Despite significant sliding of both revegetated and less vegetated slopes in the past, slumping dump material seems to move as a unit, with minimal transport of loose material onto adjacent, undisturbed areas. It is assumed that the very wet winter and spring of 2010/2011 (which had large storm events) led to the observed slumping and instability. Sediment transport from the erosion of unvegetated dumps is ongoing but does not appear to be significantly greater than that which naturally occurs on native slopes. An exception is where 2011 erosion in the drainage channel (cut by the operator down the dump



Inspection Date: November 27, 2012

Page 2 of 6

S/025/0025

to drain ponded water below the highwall) resulted in sedimentation of gray material in a channel below the dump. This erosion does not appear to have significantly impacted vegetation. It is expected that this channel will continue to erode and deposit sediment downstream during significant runoff. See the 2011 photo included below.

Instability and slumping is observed on natural slopes in Trail Canyon. See the June 6, 2012 photo included below.

East (ML 51615) Area-

On October 18th, the disturbed area was measured to be about 4 acres using a Trimble GPS unit. It was observed that significant expansion of the east area pit had occurred, including the re-disturbance of areas to the south that had been regraded. Part of the central pit has been partially backfilled using overburden from the adjacent pit excavation. The estimated maximum highwall height on the north end of the pit was 70 feet in October. A bench was present on the shallower, south end of the pit. A tall berm was in place above most of the highwall, and trees and brush were present above much (but not all) of the tallest part of the highwall. Raveling on the highwall was heard. Some minor sub-surface flow (likely from the drainage) was seeping from the pit highwall.

Dumps had been expanded further up and down the drainage and to a greater depth since the last inspection. No ponded water was observed. As with the Trail Canyon dumps, tension cracks were observed on the older dumps in the east area, on which good coverage of rabbitbrush and Indian rice grass were growing.

Excavating and other equipment were onsite. Trash at the site was consolidated into one area.

On November 27th, some additional mining activity had taken place, but the highwall appeared the same in height, at least on the north end of the pit. Some equipment had been removed. No water was observed seeping from the highwall. Oil spills were observed on graded dump material in the general area where equipment had been parked. Some trash remained.

A road running to the north along the fenceline near the backfilled gully led to the location of a few harvested trees (perhaps 20 inches in diameter).

On March 12, 2013, Russ Henry provided good pictures and video to document what appears to be quality reclamation work of much of the site. With this reclamation, the mine disturbance requiring earthwork reclamation may now be back under the permitted 2 acres. Photos were taken to document site conditions.

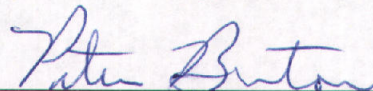
Conclusions and Recommendations:

The dump slopes in Trail Canyon and in the east area (ML51615) remain unstable, and it is recommended that dump slopes not be fully released from the permit at this point. The Division will continue to evaluate stability.

The operator has recently allowed spills of oil or other fluids at the east area, and needs to do a better job of containing oil or other fluids, and should appropriately dispose of fluids offsite.

The east area reclamation will be inspected in 2013, and any appropriate actions will be taken then. The Notice of Intent will need to be updated to identify future mining areas, for which cultural resource evaluation is needed. The Notice also needs to be updated to identify the current authorized officer for the permit.

Inspector's Signature



PNB:pbb

cc: Althea Crapo & Russ Henry, The Bug House

Will Stokes, SITLA (wstokes@utah.gov)

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Trail Canyon Area



Trail Canyon: Stitched photo of partially-reworked dump and highwalls. No recent slumping is obvious. Bare slopes with natural erosion and instability are visible up the canyon.



Trail Canyon: Slide scarp (~ 4 feet high) on revegetated dumps, south of less-vegetated dumps.



Trail Canyon: Slide scarp on revegetated dumps continuing down the hill.

Trail Canyon Area



Trail Canyon: Scarp (from left to upper center) and cracks on a re-vegetated south dump.



Trail Canyon: Example of a fairly fresh tension crack.



Trail Canyon: Large-scale natural failure north and opposite of mines in Trail Canyon.



Trail Canyon: 2011 erosion below drainage cut in the barer dump.

East (ML27618) Area



East Area: Stitched photo showing the pit, looking south. Note the berm above most of the visible highwall. The filled / mined drainage is in the foreground and to the left.



East Area: Seepage from the highwall, likely from filled drainage behind, looking north.



East Area: South area of pit, with bench and backfill. Past regrading was re-mined.

East (ML27618) Area



East Area : New and older (vegetated) dumps in the drainage from below, looking north.



East Area : Crack on a revegetated slope.



East Area: Spilled oil locations and remaining trash.



East Area: Equipment and consolidated (but loose) trash.